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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/917,383

DATE: 10/01/2002
TIME: 16:15:50

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3 <110> APPLICANT: DING, SHI-YOU
 4 ADNEY, WILLIAM S.
 5 VINZANT, TODD B.
 6 DECKER, STEPHEN R.
 7 HIMMEL, MICHAEL E.
 9 <120> TITLE OF INVENTION: THERMAL TOLERANT CELLULASE FROM ACIDOTHERMUS
 10 CELLULOLYTICUS
 12 <130> FILE REFERENCE: 40170.6US01
 C--> 14 <140> CURRENT APPLICATION NUMBER: US/09/917,383
 15 <141> CURRENT FILING DATE: 2001-07-28
 17 <160> NUMBER OF SEQ ID NOS: 14
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 21 <210> SEQ ID NO: 1
 22 <211> LENGTH: 1228
 23 <212> TYPE: PRT
 24 <213> ORGANISM: Artificial Sequence
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 38 35 40 45
 40 His Pro Ala Ile Ala Ala Thr His Val Asp Asn Pro Tyr Ala Gly Ala
 41 50 55 60
 43 Thr Phe Phe Val Asn Pro Tyr Trp Ala Gln Glu Val Gln Ser Glu Ala
 44 65 70 75 80
 46 Ala Asn Gln Thr Asn Ala Thr Leu Ala Ala Lys Met Arg Val Val Ser
 47 85 90 95
 49 Thr Tyr Ser Thr Ala Val Trp Met Asp Arg Ile Ala Ala Ile Asn Gly
 50 100 105 110
 52 Val Asn Gly Gly Pro Gly Leu Thr Thr Tyr Leu Asp Ala Ala Leu Ser
 53 115 120 125
 55 Gln Gln Gln Gly Thr Thr Pro Glu Val Ile Glu Ile Val Ile Tyr Asp
 56 130 135 140
 58 Leu Pro Gly Arg Asp Cys Ala Ala Leu Ala Ser Asn Gly Glu Leu Pro
 59 145 150 155 160
 61 Ala Thr Ala Ala Gly Leu Gln Thr Tyr Glu Thr Gln Tyr Ile Asp Pro
 62 165 170 175
 64 Ile Ala Ser Ile Leu Ser Asn Pro Lys Tyr Ser Ser Leu Arg Ile Val

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71	210	215	220
73	Tyr Ala Leu Thr Lys Leu His Ala Ile Pro Asn Val Tyr Ile Tyr Met		
74	225	230	235
76	Asp Ala Ala His Ser Gly Trp Leu Gly Trp Pro Asn Asn Ala Ser Gly		
77	245	250	255
79	Tyr Val Gln Glu Val Gln Lys Val Leu Asn Ala Ser Ile Gly Val Asn		
80	260	265	270
82	Gly Ile Asp Gly Phe Val Thr Asn Thr Ala Asn Tyr Thr Pro Leu Lys		
83	275	280	285
85	Glu Pro Phe Met Thr Ala Thr Gln Gln Val Gly Gly Gln Pro Val Glu		
86	290	295	300
88	Ser Ala Asn Phe Tyr Gln Trp Asn Pro Asp Ile Asp Glu Ala Asp Tyr		
89	305	310	315
91	Ala Val Asp Leu Tyr Ser Arg Leu Val Ala Ala Gly Phe Pro Ser Ser		
92	325	330	335
94	Ile Gly Met Leu Ile Asp Thr Leu Arg Asn Gly Trp Gly Gly Pro Asn		
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97	Glu Pro Thr Gly Pro Ser Thr Ala Thr Asp Val Asn Thr Phe Val Asn		
98	355	360	365
100	Gln Ser Lys Ile Asp Leu Arg Gln His Arg Gly Leu Trp Cys Asn Gln		
101	370	375	380
103	Asn Gly Ala Gly Leu Gly Gln Pro Pro Gln Ala Ser Pro Thr Asp Phe		
104	385	390	395
106	Pro Asn Ala His Leu Asp Ala Tyr Val Trp Ile Lys Pro Pro Gly Glu		
107	405	410	415
109	Ser Asp Gly Thr Ser Ala Ala Ser Asp Pro Thr Thr Gly Lys Lys Ser		
110	420	425	430
112	Asp Pro Met Cys Asp Pro Thr Tyr Thr Ser Tyr Gly Val Leu Thr		
113	435	440	445
115	Asn Ala Leu Pro Asn Ser Pro Ile Ala Gly Gln Trp Phe Pro Ala Gln		
116	450	455	460
118	Phe Asp Gln Leu Val Ala Asn Ala Arg Pro Ala Val Pro Thr Ser Thr		
119	465	470	475
121	Ser Ser Ser Pro Pro Pro Pro Pro Ser Pro Ser Ala Ser Pro Ser		
122	485	490	495
124	Pro Ser Pro Ser Pro Ser Pro Ser Ser Pro Ser Pro Ser Pro Ser		
125	500	505	510
127	Pro Ser Ser Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser		
128	515	520	525
130	Ser Ser Pro Ser Pro Ser Pro Ser Ser Ser Pro Ser Pro Ser Pro Ser		
131	530	535	540
133	Pro Ser Pro Ser Pro Ser Ser Ser Pro Ser Pro Ser Pro Ser Ser Ser		
134	545	550	555
136	Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Pro Ser Ser Ser Pro Ser		
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139 Pro Ser Pro Thr Ser Ser Pro Val Ser Gly Gly Leu Lys Val Gln Tyr
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143 595 600 605
145 Gln Leu Val Asn Thr Gly Ser Ser Ser Val Asp Leu Ser Thr Val Thr
146 610 615 620
148 Val Arg Tyr Trp Phe Thr Arg Asp Gly Gly Ser Ser Thr Leu Val Tyr
149 625 630 635 640
151 Asn Cys Asp Trp Ala Ala Met Gly Cys Gly Asn Ile Arg Ala Ser Phe
152 645 650 655
154 Gly Ser Val Asn Pro Ala Thr Pro Thr Ala Asp Thr Tyr Leu Gln Leu
155 660 665 670
157 Ser Phe Thr Gly Gly Thr Leu Ala Ala Gly Gly Ser Thr Gly Glu Ile
158 675 680 685
160 Gln Asn Arg Val Asn Lys Ser Asp Trp Ser Asn Phe Thr Glu Thr Asn
161 690 695 700
163 Asp Tyr Ser Tyr Gly Thr Asn Thr Thr Phe Gln Asp Trp Thr Lys Val
164 705 710 715 720
166 Thr Val Tyr Val Asn Gly Val Leu Val Trp Gly Thr Glu Pro Ser Gly
167 725 730 735
169 Thr Ser Pro Ser Pro Thr Pro Ser Pro Ser Pro Ser Pro Ser
170 740 745 750
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173 755 760 765
175 Thr Gly Val Ser Gly Ser Ser Val Ser Leu Ala Trp Asn Ala Ser Thr
176 770 775 780
178 Asp Asn Val Gly Val Ala His Tyr Asn Val Tyr Arg Asn Gly Val Leu
179 785 790 795 800
181 Val Gly Gln Pro Thr Val Thr Ser Phe Thr Asp Thr Gly Leu Ala Ala
182 805 810 815
184 Gly Thr Ala Tyr Thr Tyr Thr Val Ala Ala Val Asp Ala Ala Gly Asn
185 820 825 830
187 Thr Ser Ala Pro Ser Thr Pro Val Thr Ala Thr Thr Ser Pro Ser
188 835 840 845
190 Pro Ser Pro Thr Pro Thr Gly Thr Thr Val Thr Asp Cys Thr Pro Gly
191 850 855 860
193 Pro Asn Gln Asn Gly Val Thr Ser Val Gln Gly Asp Glu Tyr Arg Val
194 865 870 875 880
196 Gln Thr Asn Glu Trp Asn Ser Ser Ala Gln Gln Cys Leu Thr Ile Asn
197 885 890 895
199 Thr Ala Thr Gly Ala Trp Thr Val Ser Thr Ala Asn Phe Ser Gly Gly
200 900 905 910
202 Thr Gly Gly Ala Pro Ala Thr Tyr Pro Ser Ile Tyr Lys Gly Cys His
203 915 920 925
205 Trp Gly Asn Cys Thr Thr Lys Asn Val Gly Met Pro Ile Gln Ile Ser
206 930 935 940
208 Gln Ile Gly Ser Ala Val Thr Ser Trp Ser Thr Thr Gln Val Ser Ser
209 945 950 955 960
211 Gly Ala Tyr Asp Val Ala Tyr Asp Ile Trp Thr Asn Ser Thr Pro Thr

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212	965	970	975	
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218	995	1000	1005	
220	Val Ala Gly His Thr Trp Asn Val Trp Gln Gly Gln Gln Thr Ser Trp			
221	1010	1015	1020	
223	Lys Ile Ile Ser Tyr Val Leu Thr Pro Gly Ala Thr Ser Ile Ser Asn			
224	1025	1030	1035	1040
226	Leu Asp Leu Lys Ala Ile Phe Ala Asp Ala Ala Ala Arg Gly Ser Leu			
227	1045	1050	1055	
229	Asn Thr Ser Asp Tyr Leu Leu Asp Val Glu Ala Gly Phe Glu Ile Trp			
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232	Gln Gly Gly Gln Gly Leu Gly Ser Asn Ser Phe Ser Val Ser Val Thr			
233	1075	1080	1085	
235	Ser Gly Thr Ser Ser Pro Thr Pro Ser Pro Ser Pro Thr Pro Thr Pro			
236	1090	1095	1100	
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241	Thr Ser Ser Pro Ser Ser Gly Val Ala Cys Arg Ala Thr Tyr Val			
242	1125	1130	1135	
244	Val Asn Ser Asp Trp Gly Ser Gly Phe Thr Ala Thr Val Thr Val Thr			
245	1140	1145	1150	
247	Asn Thr Gly Ser Arg Ala Thr Asn Gly Trp Thr Val Ala Trp Ser Phe			
248	1155	1160	1165	
250	Gly Gly Asn Gln Thr Val Thr Asn Tyr Trp Asn Thr Ala Leu Thr Gln			
251	1170	1175	1180	
253	Ser Gly Ala Ser Val Thr Ala Thr Asn Leu Ser Tyr Asn Asn Val Ile			
254	1185	1190	1195	1200
256	Gln Pro Gly Gln Ser Thr Thr Phe Gly Phe Asn Gly Ser Tyr Ser Gly			
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275	tccatcgtgc cgctggcgat gcagcatctt gccatcgccg cgacgcacgt cgacaatccc 180			
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277	gcaaccaga ccaatccac tctcgacgaa aatgcgcg tcgtttccac atattcgacg 300			
278	gcccgtctgga tggaccgcat cgctgcgtca aacggcgatc acggcgacc cggcttgacg 360			
279	acatatctgg acgcccctt ctccccagcag cagggAACCA cccctgaagt cattgagatt 420			
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 284 caaggcatcg agtacgcgt cacgaaattt cacgcattc cgaacgtgt catctacatg 720
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VERIFICATION SUMMARY

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DATE: 10/01/2002

TIME: 16:15:51

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